FEDERAL AVIATION ADMINISTRATION
AQS IT TECHNICAL BRANCH
AQS-230 (DEVELOPMENT)

Integrated Airmen Certification and/or Rating Application (IACRA)

DRAFT Statement of Work

February 01, 2009

IACRA
STATEMENT OF WORK

1. Background

Airman Certification and/or Rating Application (ACRA) is a stand-alone computer based PC program that automates the airman application/certification process and allows Designated Examiners (DE's), FAA Aviation Safety Inspectors (ASI's), and Aviation Safety Technicians (AST's) to electronically complete the 8700-10 form and validate airman information through logical business rules. The application is printed, manually signed and mailed by post to the Airman Registry in Oklahoma City.

ACRA requires distribution of software media to thousands of users across the country. Users must obtain the latest software so that they have the latest requirements and application features. With the advent of "Integrated" ACRA or IACRA, no new functionality will be added to the ACRA stand-alone program.

IACRA is a web-based enterprise application that provides functionality not available in the ACRA stand-alone program. IACRA electronically captures and validates airman information required to complete the airman application and the other certification documents including the appropriate temporary airman certificate and knowledge test results. It integrates critical elements of multiple FAA program databases. IACRA automatically ensures that applicants meet regulatory and policy requirements, and it uses digital signatures throughout the certification process which brings the application in compliance with the Government Paperwork Elimination Act.

IACRA Today

Proof of Concept - An IACRA proof of concept was developed in order to demonstrate the viability of this approach. The proof of concept consisted of a security front-end that allowed a beta user access to the ACRA database via the Internet. Citrix software was used as the web interface.

Functionally - The IACRA system design allows a Designated Examiner with digital signature authority to have applications and ratings collected and validated in real-time, with checks against the Registry and other FAA databases. Certificates can be validated immediately.

Technically - IACRA runs on a centralized server, accessible through the Internet. The web based architecture provides access to the application by the public. This approach facilitates separate data entry by the applicant and the examiner, and it facilitates integration with other FAA, and eventually, other governmental databases.

2. Objective

The objective of this Statement of Work is to perform design and development, integration, and technical support for the fielded IACRA version with digital signature. Design and development include the front-end registration module, the 141 School Internet Test Delivery (ITD) module, and web page development and maintenance. Integration efforts also consist of other FAA databases that will ultimately result in a data source whose whole is greater than the sum of its parts with regards to a single consolidated, comprehensive flow of certification information to the registry. Technical support includes a formal test program, technical writing services, formal coordination with the certification module team, and program management.

3. Approach

The IACRA production version consists of Windows2003 IIS Web and SQL 2005 Servers where the user accesses the application via the Internet. These were chosen as a technology solution for IACRA since they are much more maintainable and scalable, and they provide more opportunity for integration than the current ACRA ACCESS database. As a production system, IACRA could eventually become accessible through personal handheld devices as well. The IACRA approach offers several advantages over the current ACRA technical architecture, including:

• The application is accessible through an internet browser. This architecture facilitates separate data entry by the applicant and the examiner.

• Facilitation of future integration with other FAA and governmental systems

• Facilitation of greater use of digital signature thus complying with the Government Paperwork Elimination Act.

AVS requires a contractor with sufficient technical qualifications and experience to support it in all aspects of the operation and support of the Integrated Airman Certification and Registration Application (IACRA). This is an operational AVS information system that simplifies the ability of Aviation Safety Inspectors/Designated Examiners to provide accurate certification applications to the Airman Registry. Detailed descriptions of the types of professional services required by the AVS are provided in the sections that follow.

All automation systems require development, implementation and operational support. The IACRA development and deployment team require staff including Database Analysts, developers, documentation/online publications specialists, a testing/quality assurance function and Technical Management.

4. Work to Be Performed

The services to be provided under this contract shall be composed of work in the following task areas:

1. Design and Development of IACRA
2. IACRA Integration
3. Technical Support
4. Maintain the IACRA Training Server

A narrative description of each task area is explained in the subsections below.

4.1 Task 1: Design and Development

Activities for this task include:

Design and Development of the Application
Redesign the Digital Signature
Continued development of paths as assigned per the 8900 Regulations.

4.1.1 IACRA User Registration

IACRA

The on-line registration module will be updated with each new certification path and user type. Enhancement will be on-going for usability and maintainability. This functionality will be offered to the public via the IACRA website.

4.1.2 IACRA Web Page Development and Maintenance

Content Development/Design

The IACRA web page provides the user with the information necessary to understand how to register and complete an FAA form 8710, and who to call when assistance is required. In addition, there are several user aids required to be on-line for common issues.

Hardware/Software

Web page support software may be required to support the IACRA Web Page in order to be in compliance with current security requirements. Internet address and domain names are currently in use.

Web page on-going tasks:

- A frequently asked questions (FAQ) section will be updated with each release and regularly maintained to provide answers to common questions.

- Contact methods and addresses will be available for the AVS Support Central team.

- Regular review and maintenance will be performed on the IACRA Web page, as required, in order to ensure the stability and integrity of the site. Section 508 requirements apply.

4.1.3 Support IACRA Administrator tools

The contractor shall support the design, development and maintenance of IACRA Administrator tools

Registration Module Administrator tool

Support for the Registration module will be performed through an administration tool allowing the system administrators, the AVS support desk, and the Training Academy to run data reports and perform due diligence on user errors.

Training Server Administrator tool

Support for the Training server will be performed through an administration tool allowing the system administrator and AVS support desk to create training data, purge training data, and reset training scenarios.

4.2 Task 2: IACRA Integration

Activities for this task include:

ATS Technical Support

The contractor shall provide technical support to include but not be limited to:

- Performing multiple, varied, and complex ad hoc retrieval for branch personnel
- Creating stored procedures and database support
- Performing requirements analysis with accompanying documentation
- Supporting the enhancement of the Item bank system

4.2.2 Registry Interface

The Registry is the "data of record" for airman certification. They provide blue ribbon packages to the court system for airman actions. IACRA forwards wrapped airman certification data in "work packets" nightly to the Registry server. Currently, the Registry uses an IACRA tool to printout each item for electronic scanning.

With the advent of the Registry's RMS system, the electronic work package will be integrated into the Registry server and maintained on-line. Printouts will only be required in the preparation of court documents. The contractor shall provide an enhanced electronic interface with the Registry as required by the RMS system.

4.2.3 Programming Contractor Interface/Integration

The contractor shall coordinate with and support the certification module programmer to include but not be limited to:

- Support for coordination between certification module and IACRA Registration module, Registry interface and development environments (development, test, and staging).
- Assist in PTRS upload as required
- Review of IACRA certification module development documentation, as requested
- Support in IACRA certification module testing, bug identification, and version release FTP package

4.2.4 IACRA Integration

Web Based Reporting

IACRA will be able to provide web based reporting of captured data from the IACRA data basing and integrate that data with the current data mart for comprehensive reporting. Web based reports shall be developed based on the needs of the FAA and funding levels. As directed by the COTR.

Ongoing Integration

A highly desirable feature of the IACRA Architecture is that it facilitates integration with other FAA critical applications. There is great potential to streamline the Airman Certification Process, reduce duplicate data and effort, and improve aviation safety. Therefore, this task will continue support with current integration efforts and investigate integration opportunities with other FAA applications. As designated by the COTR, the contractor shall investigate the benefits and feasibility of including specific features or programs in the IACRA application. The Contractor responsible for programming IACRA shall be responsible for coding the interface. The Contractor responsible for systems engineering and integration will monitor and provide input during this analysis, including SQL and IIS expertise.

4.3 Task 3: Technical Support

Activities for this task include:

4.3.1 System Engineering/Database Support

The contractor shall serve in the overall Systems Engineering Role during the design and development of IACRA. The contractor shall provide database support during the design and development of IACRA. Activities include but are not limited to:

- Development/test/staging server maintenance including system administration
- IACRA database normalization, as required
- Support of stored procedures and triggers

- Preparation of the AQS-250 FTP package to move releases to production

4.3.2 System Testing

IACRA testing verifies that the IACRA application and ATS components are high quality products that meet the needs of the business community. The contractor shall provide a testing capability that ensures that system components and modules operate together as an integrated whole.

- Provide testing procedures and checklists
- Review development unit testing results
- Perform life cycle testing
- Identify and communicate defects, issues and risks
- Create regression testing scripts
- Provide Section 508 testing

4.3.3 Documentation

IACRA documentation will be provided to the user community via the IACRA website to the extent to which it is available. This task entails the development of IACRA project documentation to support program modules and activities. The Contractor responsible for programming will provide IACRA User documentation.

4.3.4. Project Management

This task entails the management of the IACRA program covering both reporting and technical activities.

Monthly Status Report

The contractor shall provide the contracting officers technical representative (COTR) with written, monthly status reports, in a format to be provided by the COTR at the time of the post-award conference. These reports shall document progress made, shortfalls, issues encountered, and deliverables made, number and category of hours expended, balance left on the contract, and any modifications in the CLINs from the original task order.

Support Agency request for information

Periodically the COTR for IACRA representing the FAA will request programmatic and planning information concerning application development. Response to questions, white papers and briefings may be required in order for the FAA to plan resource and funding levels.

4.3.5 Digital Signature Capability

IACRA incorporates digital signature functionality through the use of a single server certificate. The contractor shall coordinate with the digital signature vendor on any enhancements or changes required in the software or digital signature process, and enhance and maintain the digital signature servers.

5. Deliverables

Task deliverables shall also be presented to the COTR for comment and review in draft form before being published. When automated tools are used to prepare project deliverables, the contractor shall provide the COTR with electronic media copies of deliverables, in addition to hard copy.

Table 1-Deliverables and Due Dates

	PRODUCT/SERVICES/DELIVERABLES	DUE DATES
Task 1	IACRA Web Page Updates	As directed by the COTR
Task 2	Registry Print Utility tool software enhancements	As directed by the COTR
Task 2	Integration Analysis and Implementation Plan for Integration of companion databases.	On-going and as directed by the COTR
Task 3	Defect Tracking Report	Weekly beginning the 15th after the post-award conference.
Task 3	IACRA Project Management Plan	30 calendar days after project post-award conference.
Task 3	Monthly Status Reports	Beginning the 15th of the month following the post award conference and the 15th of each month thereafter.
Task 3	Respond to COTR/Agency Requests for Information	As Directed by the COTR
Task 3	IACRA Inspector Desktop Instructions	20 calendar days before rollout implementations

6. Period of Performance

The base period of performance for this statement of work is one year from the date of award, with four option years to follow.

7. Location of Work Performance

Work for this phase of the project will be performed both at, the contractor (Off Site) and at the FAA locale, as appropriate to the particular activity.

8. Government Furnished Facilities

When at the FAA site, FAA will provide use of government office space and facilities, to include:

* Sufficient cubicle space for the number of personnel tasked at any given time
* Desks, chairs, and lighting
* Voice and data telephone line access and handsets, as required
* Computer, monitor, keyboard

The FAA shall provide contractor personnel with government identification cards as required, in order to gain access to the government facilities. The contractor personnel shall cooperate fully with all background investigation or bonding procedures that are customarily required for FAA facility access privileges.

9. Inspection and Acceptance

The deliverables cited in this SOW shall be delivered to the COTR on or before the due dates. The COTR shall have five business days to inspect the work and either report deficiencies or accept the deliverable. The contractor shall then have five business -days to correct any identified deficiencies and re-deliver to the Government.